

REMARKS

Claim Rejections - 35 U.S.C. §§ 102/103

The Examiner has rejected claims 1, 8, 9, and 12 under 35 U.S.C. § 102(b) as being anticipated by Krivokapic '587. The Examiner has rejected claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Krivokapic '587 as applied to claims 1, 8, 9 and 12 above, and further in view of Takeuchi '351. The Examiner has rejected claim 3 under 35 U.S.C. § 103(a) as being unpatentable over Krivokapic '587 as applied to claims 1, 8, 9 and 12 above, and further in view of Choi '582. The Examiner has rejected claim 4 under 35 U.S.C. § 103(a) as being unpatentable over Krivokapic '587 in view of Takeuchi '351 as applied to claim 2 above, and further in view of Choi '582. The Examiner has rejected claims 5 and 6 under 35 U.S.C. § 103(a) as being unpatentable over Krivokapic '587 as applied to claims 1, 8, 9 and 12 above, and further in view of Choi et al. '088. The Examiner has rejected claims 7, 10 and 11 under 35 U.S.C. § 103(a) as being unpatentable over Krivokapic '587. The Examiner has rejected claim 13 under 35 U.S.C. § 103(a) as being unpatentable over Krivokapic '587 as applied to claims 1, 8, 9 and 12 above, and further in view of Wieczorek et al. '894 B1 and further in view of Takeuchi '351. The Examiner has rejected claim 14 under 35 U.S.C. § 103(a) as being unpatentable over Krivokapic '587 in view of Wieczorek et al. '894 B1 in view of Takeuchi '351 as applied to claim 13 above, and further in view of Choi '582.

It is Applicant's understanding that the cited references fail to teach or render obvious Applicant's invention as set forth in claims 1-14. Applicant's have amended claims 1-14 to more particularly point and distinctly claim the subject matter which Applicant's regards as the invention. Specifically, Applicant has amended claims 1-14 to indicate that

the source/drain regions create “inflection points directly beneath” the lower portion of the gate electrode formed directly on the gate dielectric layer. In contrast, Krivokapic et al. describes the source/drain regions 217 and 218 as extending directly underneath the spacers 219 and not directly beneath the gate electrode 210 as claimed by Applicant. As such, Krivokapic clearly fails to teach or render obvious Applicant’s invention as claimed.

Additionally, neither Takeuchi, Choi or Wieczorek describe or suggest the formation of source/drain regions with inflection points which extend directly beneath the gate electrode. As such, the combination of these references with Krivokapic also fails to teach or render obvious Applicant’s invention as claimed in claims 1-14. As such, Applicant respectfully requests the removal of the 35 U.S.C. §§ 102 and 103 rejections of claims 1-14 and seeks an early of these claims.

Additionally, with respect to claims 3, 4 and 14, Applicant further teaches and claims a device wherein the gate dielectric layer is thicker beneath the outside edge of the gate electrode than the gate dielectric layer beneath the center of the gate electrode. Contrary to the Examiner’s position, it is Applicant’s understanding that one of ordinary skill in the art would not combine Krivokapic with Choi because the processes and structures described in the cited references are incompatible with one another. As set forth in previous responses, Choi utilizes an entirely different gate electrode structure and fabrication methodology than Krivokapic in order to fabricate a gate dielectric layer which thicker at the edges than beneath the center. Applicant is unaware of how one of ordinary skill in the art would combine the process of Choi with the process of Krivokapic in order to obtain a gate dielectric layer which is thicker at the edges than at the center in the structure of Krivokapic. The Examiner has provided no teaching or suggestion whatsoever on how such different processes would be combined. When combining art, one must look to the teachings of the reference as a whole and not just to individual features. As such, for the above mentioned reasons, it is Applicant’s understanding that claims 3, 4 and 14 are patentable over the cited art for at least this reason also.

Action Mad Final

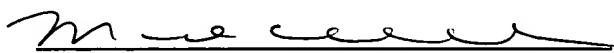
The Office Action mailed July 30, 2003 indicated on the cover sheet that the action was made non-final, however, the conclusion of the Office Action on page 8 indicates that the action was made final. In communication with the Examiner that the conclusion making the action final was made in error and that the Office Action should be treated as a non-final rejection. Accordingly, Applicant has treated the Office Action dated July 30, 2003 as being a non-final Office Action.

Pursuant to 37 C.F.R. 1.136(a)(3), applicant(s) hereby request and authorize the U.S. Patent and Trademark Office to (1) treat any concurrent or future reply that requires a petition for extension of time as incorporating a petition for extension of time for the appropriate length of time and (2) charge all required fees, including extension of time fees and fees under 37 C.F.R. 1.16 and 1.17, to Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

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Michael A. Bernadicou
Reg. No. 35,934

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, CA 90025-1026
(408) 720-8300